

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

(Case No. 04-051)

In re A _l	pplication of:	,635))		
	Brian T. Cunningham.) Group Art Unit: 2874		
Serial N	No.: 10/812,635)		
Filed:	March 29, 2004)		
For:	Photonic Crystal Defect Cavity Biosensor) Confirmation No. 3485		

TRANSMITTAL LETTER

Mail Stop Missing Parts Commissioner for Patents P.O Box 1450 Alexandria, Virginia 22313-1450

In regard to the above identified application:

- 1. We are transmitting herewith the attached:
 - 1. Information Disclosure Statement
 - 2. Form PTO-1449
 - 3. Cited references
 - 4. Return postcard
- 2. With respect to additional fees:
 - A. X No additional fee is required.
 - B. Attached is a check in the amount of \$0.
 - C. ___ Charge the total additional fee to our Deposit Account No. 13-2490.
- 3. Please charge any additional fees or credit overpayment to Deposit Account No. 13-2490. A duplicate copy of this sheet is enclosed.
- 4. CERTIFICATE OF MAILING UNDER 37 CFR § 1.8: The undersigned hereby certifies that this Transmittal Letter and the paper, as described in paragraph 1 hereinabove, are being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria, Virginia, 22313-1450 on this <u>O</u> day of August 2004.

Bv:

Thomas A. Fairhall Reg. No. 34,591



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INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

Pursuant to the duty of disclosure provided by 35 C.F.R. § 1.56 and §§ 1.97-98, the applicant wishes to make the following references and information of record in the above-identified application. The references are also listed in the PTO-1449 form enclosed herewith. It is requested that the references and information be given careful consideration and that they be cited of record in the prosecution history of the present application so that they will appear on the face of the patent issuing from the present application. Pursuant to the office's waiver of 37 C.F.R. § 1.98 (a)(2)(i), copies of the U.S. patent documents are not enclosed.

In the judgment of the undersigned, portions of the references may be material to the examination of the pending claims. No representation is intended as to the relative importance of any portion of the references. This Statement is not a representation that

McDonnell Boehnen Hulbert & Berghoff LLP 300 South Wacker Drive

Chicago, Illinois 60606 Telephone: (312) 913-0001 Facsimile: (312) 913-0002 the cited references have effective dates early enough to be "prior art" within the meaning of 35 U.S.C. §§ 102 or 103.

CITED REFERENCES

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Patent No.	Date Filed	<u>Inventor</u>	Class/	Subclass
2003/0113766 A1	06/19/03	Pepper et al.	435	6
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Other Documents:

- 1. Pacradouni, V., W.J. Mandeville, A.R. Cowan, P. Paddon, J.F. Young, and S.R. Johnson, *Photonic band structure of dielectric membranes periodically textured in two dimensions*. Physical Review B, 2000. 62(7): p. 4204-4207.
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- 4. Liu, Z.S., S. Tibu1eac, D. Shin, P.P. Young, and R. Magnusson, *High efficiency guided-mode resonance filter*. Optics Letters, 1998.23(19): p. 1556-1558. Neviere, M., P.

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- 5. Neviere, M., P. Vincent, R. Petit, and M. Cadilhac, *Systematic study of resonances ofholographic thin film couplers*. Optics Communications, 1973. 9(1): p. 48-52.
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- 8. Peng, S., Experimental demonstration of resonant anomalies in diffraction from two-dimensional gratings. Optics Letters, G. Michael Morris. 21(8): p. 549-551.
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- 11. Tibu1eac, S. and R. Magnusson, Diffractive narrow-band transmission filters based on guided-mode resonance effects in thin-film multilayers. IEEE Photonics Technology Letters, 1997.9(4): p.464-466.
- 12. Cunningham, B. T., P. Li, B. Lin, and J. Pepper, *Colorimetric resonant reflection as a direct biochemical assay technique*. Sensors and Actuators B, 2002.81: p. 316-328.
- 13. Cunningham, B.T., J. Qiu, P. Li, J. Pepper, and B. Hugh, *A plastic colorimetric resonant optical biosensor for multi parallel detection of label-free biochemical interactions*. Sensors and Actuators B, 2002.85: p. 219-226.
- 14. Haes, A.J. and R.P.V. Duyne, A Nanoscale Optical Biosensor: Sensitivity and Selectivity of an Approach Based on the Localized Surface Plasmon Resonance Spectroscopy of Triangular Silver Nanoparticles. Journal of the American Chemical Society, 2002. 124: p. 10596-10604.
- 15. Li, P., B. Lin, J. Gerstenmaier, and B. T. Cunningham, A new method for label-free imaging ofbiomolecular interactions. Sensors and Actuators B, 2003.
- 16. John, S., Strong localization of photons in certain disordered dielectric superlattices. Physical Review Letters, 1987.58(23): p. 2486-2489.
- 17. Srinvasan, K., P.E. Barclay, o. Painter, J. Chen, A.Y. Cho, and C. Gmachi, *Experimental demonstration of a high quality factor photonic crystal microcavity*. Applied Physics Letters, 2003.83(10): p. 1915-1917.
- 18. Painter, O. K. Srinivasan, J.D. O'Brien, A. Scherer, and P.D. Dapkus, *Tailoring of the resonant mode properties of optical nanocavities in two-dimensional photonic crystal slab waveguides*. JQ\lcflla1 of Optics A: Pure and Applied Optics, 2001.3: p. S161-S170.
- 19. John, S. and V.1. Rupasov, Multiphoton localization and propagating quantum gap solutions in a frequency gap medium. Physical Review Letters, 1997.79(5): p. 821-824.
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Respectfully submitted,

McDonnell Boehnen Hulbert & Berghoff LLP

Date: 8/10/04

y: Thomas A. Fairhall

Reg. No. 34,591

CERTIFICATE OF MAILING

The undersigned hereby certifies that this Information Disclosure Statement is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia, 22313-1450 on this day of August 2004

Thomas A. Fairhall

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(Rev 2	-32)

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nark Office

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use several sheets if necessary)

Atty. Docket No.	Serial No.
04-051	10/812,635

Brian Cunningham

Filing Date: 03/29/2004

Group: 2874

U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	2003/0113766 A1	06/19/03	Pepper et al.	435	6	
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	2003/0092075 A1	05/15/03	Pepper	435	7.9	

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	Document Number						Date	Country	Class	Subclass	Trans	lation	
									_			Yes	No

MCDONNELL BOEHNEN HULBERT & BERGHOFF LLP 300 SOUTH WACKER DRIVE CHICAGO, ILLINOIS 60606 TEL: (312) 913-0001 FAX: (312) 913-0002

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Sheet 3 of 3

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04-051	10/812,635
Applicant: Brian Cunningha	am
Filing Date:	Group:

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03/29/2004

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EXAMINER	DATE CONSIDERED
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